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DOCKET FILE COPY ORIGINAL
March 1, 1995

VIA MESSENGER
Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

ORIGINAL

RECEIVED

MAR - 1 1995

Re: Reply Comments, ET Docket 94-124 FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Dear Mr. Caton:

This letter will serve as the Reply Comments of the Intelligent Transportation Society of America ("ITS America") in the above-referenced proceeding. By its NPRM in this Docket, the FCC has proposed to open for commercial development and use a portion of the millimeter wave frequency bands above 40 GHz. Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications, FCC 94-273 (November 8, 1994) ("NPRM"). Included within the NPRM's proposal is an allocation of the 47.2-47.4 GHz, 76-77 GHz, 94.7-95.7 GHz, and 139-140 GHz bands for unlicensed vehicular radar systems.

ITS America is a non-profit educational and scientific organization whose purpose is to coordinate and promote the research, development, and deployment of Intelligent Transportation Systems ("ITS") in the United States.¹ With a membership comprised of federal, state, and local government, private industry, and academic interests, ITS America is a public/private partnership and serves as a utilized Federal Advisory Committee to the United States Department of Transportation ("USDOT").

Over the past five years, ITS America has served as the focal point for public and private sector cooperation in enabling the expeditious deployment of ITS services and products throughout the U.S. and in realizing the goals articulated by Congress in the Intermodal Surface Transportation Efficiency Act of 1991 ("ISTEA"). ITS America has developed a Strategic Plan for the implementation of ITS within the United States that has been recognized by the FCC and many others as authoritative, has participated in the on-going ITS Architecture development program under the auspices of the USDOT, has coordinated with USDOT the preparation of a National Program Plan that has identified a set of twenty-nine user services to be accommodated within the ITS infrastructure, and has promoted at every turn consensus on the deployment of an ITS infrastructure in the U.S.

¹ The views expressed herein are those of ITS America and are not necessarily shared by each of the individual members of the Society.

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ITS America commends the FCC for its leadership in recognizing the many important public benefits of ITS services and products in this and other Dockets. Indeed, the FCC has clearly stated its commitment to ITS:

Today's creation of TIRS clearly demonstrates this agency's commitment to the continued integration of radio-based technologies into the nation's transportation infrastructure and our commitment to the development and implementation of the nation's intelligent transportation systems of the future.

Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, FCC (5-41 (February 6, 1995) at paras. 5-6. In the NPRM (at paras. 29-30), the FCC again acknowledged the "promise and importance" of ITS technology, which merits "special consideration" by this Commission.

Many commenters in ET Docket 94-124 have acknowledged the importance of the allocation of adequate spectrum for the introduction of commercial vehicular radar systems on a large scale. See, e.g., Comments of American Automobile Manufacturers Association ("AAMA"), January 30, 1995. ITS America concurs with this need.

In particular, the National Program Plan for ITS, which has recently become final and will be widely distributed at ITS America's Fifth Annual Meeting in Washington, D.C. from March 15 through March 17, identifies seven "bundles" of user services. A chart summarizing these ITS service bundles excerpted from the National Program Plan is attached to these Reply Comments. A copy of the Preliminary Program for the Annual Meeting is also attached hereto.

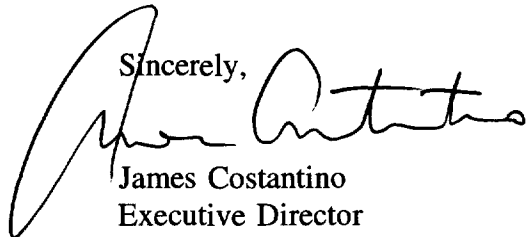
The seventh bundle identified in the Program Plan is entitled "Advanced Vehicle Control and Safety Systems," and includes the following user services: longitudinal collision avoidance, lateral collision avoidance, intersection collision avoidance, vision enhancement for crash avoidance, safety readiness, pre-crash restraint deployment, and automated highway systems. These services include many at the core of the safety benefits that are offered by ITS, which were estimated in 1992 in the ITS America Strategic Plan to reduce traffic fatalities by eight percent by 2011, or 3,300 lives saved each year. We believe at this time that this estimate likely will prove conservative.

The spectrum that will be allocated in this Docket to vehicular radar systems thus will in essence provide the first generation allocation of spectrum for the widescale deployment of critical vehicle safety systems, and will provide a base for the development of the commercial marketplace for these products. In addition, this allocation of spectrum will enhance the understanding and public acceptance of vehicle control systems and will thus serve to

Mr. William F. Caton
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believes that the expeditious allocation of adequate spectrum for vehicle radar systems will further the development of AHS and will help meet the 1997 deadline established by Congress in ISTEA for the deployment of an operational AHS in the U.S.

For these reasons, ITS America strongly supports the allocation of adequate and suitable spectrum in this Docket to vehicle radar systems as demonstrated by the Comments of AAMA and others.

Sincerely,

James Costantino
Executive Director

Of Counsel:

Robert B. Kelly

KELLY & POVICH, P.C.
Suite 300
1101 30th Street, N.W.
Washington, D.C. 20007
(202) 342-0460

Table 3-1 User Service Bundles

Bundle	User Services
<i>1. Travel and Transportation Management</i>	1. En-Route Driver Information 2. Route Guidance 3. Traveler Services Information 4. Traffic Control 5. Incident Management 6. Emissions Testing and Mitigation
<i>2. Travel Demand Management</i>	1. Demand Management and Operations 2. Pre-Trip Travel Information 3. Ride Matching and Reservation
<i>3. Public Transportation Operations</i>	1. Public Transportation Management 2. En-Route Transit Information 3. Personalized Public Transit 4. Public Travel Security
<i>4. Electronic Payment</i>	1. Electronic Payment Services
<i>5. Commercial Vehicle Operations</i>	1. Commercial Vehicle Electronic Clearance 2. Automated Roadside Safety Inspection 3. On-board Safety Monitoring 4. Commercial Vehicle Administrative Processes 5. Hazardous Materials Incident Response 6. Freight Mobility
<i>6. Emergency Management</i>	1. Emergency Notification and Personal Security 2. Emergency Vehicle Management
<i>7. Advanced Vehicle Control and Safety Systems</i>	1. Longitudinal Collision Avoidance 2. Lateral Collision Avoidance 3. Intersection Collision Avoidance 4. Vision Enhancement for Crash Avoidance 5. Safety Readiness 6. Pre-Crash Restraint Deployment 7. Automated Highway System

INTELLIGENT
TRANSPORTATION:
SERVING THE USER
THROUGH DEPLOYMENT

**ITS
AMERICA**

Fifth ANNUAL MEETING
AND Exposition

MARCH 15 -17, 1995
SHERATON-WASHINGTON HOTEL
WASHINGTON, D.C.



Intelligent Transportation: Serving the User Through Deployment

The annual meeting of the Intelligent Transportation Society of America (ITS AMERICA) brings together thousands of corporate executives, government officials, scientists and engineers, academicians and researchers and other professionals in the ITS field from across the country and throughout the world. The 1995 meeting in the nation's capital provides a prime opportunity for discussions with government leaders, legislative decision-makers, captains of industry, and a vast array of influential national organizations and associations. It offers a full agenda of technical sessions, seminars, and site tours, coupled with a sold-out exhibit area displaying cutting-edge ITS technology and products ready for deployment.

As a truly unique public-private partnership, ITS AMERICA is the institutional embodiment of intelligent transportation systems in the United States. Its annual meeting puts into perspective the mosaic of research, development, manufacture, purchase, and operation of the communications, electronic, and computer technologies needed to deploy intelligent transportation systems throughout the country. A few hallmarks:

- Largest all-ITS conference and exposition ever held
- Exhibits displaying the latest ITS technology and products
- 70 specialized ITS technical sessions
- Roadmap for getting ITS contracts
- Top quality technical papers and presenters selected by peer review and invitation
- Unparalleled networking opportunities
- Attended by national and international ITS leaders
- The premier ITS meeting — sponsored by ITS AMERICA

Who Should Attend

Members of ITS AMERICA

If your organization is an ITS AMERICA member, this is your meeting and a central benefit of your membership. It is the time and place to network with your colleagues, make your voice heard in national and world ITS councils, and keep up-to-date with ITS trends, developments, and opportunities.

Organizations and Individuals Involved in Intelligent Transportation

If your organization or agency is not an ITS AMERICA member but is involved in transportation management or consulting, or advanced transportation technology applications, you cannot afford to miss the information and contacts available at this highly acclaimed meeting in the nation's capital.

Organizations Considering ITS Involvement

If you or your organization are considering involvement in any transportation-related technology, the ITS AMERICA annual meeting is the single most cost-effective opportunity to gather current market intelligence, meet potential customers and partners, evaluate competitors, and explore the world of ITS.

Welcome and Orientation for New Participants

An informal briefing followed by a question and answer period will be offered on Wednesday morning, March 15, at 10:00 am for those attending the ITS AMERICA Annual Meeting for the first time. The briefing will acquaint attendees with the activities of ITS AMERICA, the goals and objectives of ITS, and an overview of the meeting to allow attendees to participate to the fullest extent. All registrants and guests are welcome to attend.

PRELIMINARY PROGRAM

Monday, March 13

Technical Committee Meetings
See page 23 for schedule

Tuesday, March 14

Technical Committee Meetings
See page 23 for schedule

11:00 am

Registration/Message Desk

Wednesday, March 15

Optional Technical Facility Tours
See page 26 for schedule
Technical Committee Meetings
See page 23 for schedule

7:00 am

Registration/Message Desk

8:00 am-12 Noon

- Contracting Partnerships Seminar
- Coordinating Council Meeting

10:00 - 11:00 am

Welcome and Orientation for
New Attendees

11:00 am

Exhibits Open

12:30 pm

1 Opening Session

Welcome

- Jack L. Kay, Chair, 1995 ITS AMERICA Annual Meeting and President, JHK and Associates, Emeryville, California

Introduction of Speaker

- Lawrence D. Dahms, Chair, Board of Directors, ITS AMERICA and Executive Director, Metropolitan Transportation Commission, Oakland, California

Invited Speaker

- The Honorable Federico Peña, Secretary, United States Department of Transportation, Washington, D.C.

1:30 pm

Concurrent Sessions

2 U.S. DOT and ITS: What Lies Ahead?

A dialogue with U.S. DOT officials on the future direction of the ITS program.

3 Future Societal Issues and How to Address Them

Edith Page, Manager Federal Programs, Bechtel Corporation, Washington, D.C., presiding

- Report on Seminar/Workshop on Methodologies for Analysis of Societal Issues in Transportation

William A. Hyman, Director of Transportation Studies Program, Urban Institute, Washington, D.C.

- Report on ITS AMERICA Alternatives Futures Symposium

Christopher Cluett, Senior Research Scientist, Battelle, Seattle, Washington

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** Indicates papers to be printed in the proceedings.

**Wednesday,
March 15 (continued)**

Register Now

All previous annual meetings have overflowed capacity. To avoid disappointment or inconvenience, register now.

This Fifth Annual Meeting will be the ITS community's one gathering for local, state, and government officials; ITS manufacturers; consultants; transportation associations; electronics, communications, and control professionals; academics; and others.

Join American and world ITS leaders who will gather in Washington, D.C. to examine and shape the future of transportation technology and policy.

Registration Is Easy

Complete and mail or Fax the registration form at the back of this brochure. Pay by check or credit card.

Do it now!



400 Virginia Avenue, S.W.
Suite 800
Washington, D.C. 20024-2730
(202) 484-4847
Fax (202) 484-3483

Future Societal Issues and How to Address Them (continued)

- **Report on Research on Societal Implications by AHS Pre-Cursor Teams**

Mark Miller, PATH, Institute of Transportation Studies, University of California, Richmond, California

4 Advanced Vehicle Control Systems

William Stevens, Division Assistant, The MITRE Corporation, Washington, D.C., presiding

- **Lane Change Maneuver Via Modern Steering Control Methods****

Richard T. O'Brien, Graduate Student and Pablo A. Iglesias, The John Hopkins University, Baltimore, Maryland; Thomas J. Urban, Johns Hopkins University, Laurel, Maryland

- **Development of Collision Warning and Auto-Brake System Based on a Driver-Model****

Yoshiyuki Hashimoto, Staff Engineer, Toyota Motor Corporation, Susono, Shizuoka, Japan; Kazuya Sasaki, Project Manager, Mitsuo Kawai, General Manager, Toyota Motor Corporation, Component & System Development Center, Japan

- **Demonstration of an Autonomous Convoying Concept****

Ben Motazed, Program Manager, RedZone Robotics, Inc., Pittsburgh, Pennsylvania; Dean Pomerleau, Todd Jochem, Vision & Autonomous and Alonzo Kelly, Field Robotics Center, Robotics Institute, Carnegie Mellon University, Pittsburgh, Pennsylvania

5 Telecommunications Part 1

D. James Chadwick, Consulting Engineer, The MITRE Corporation, McLean, Virginia, presiding

- **Most-Urgent-First Protocol for Real-Time Wireless Channels in a Digital Cellular/PCN Environment****

Kang G. Shin, Professor, EECS, and Zhihui Huang, Real-Time Computing Laboratory, The University of Michigan, Ann Arbor, Michigan

- **An Integrated Communication and Position Solution for IVHS Applications****

Thomas Yang, Data Radio System Manager, RAM Mobile Data, Woodbridge, New Jersey

- **Communication Load Requirements for Alternative ATIS Architectures****

Melvyn Cheslow, and S. Gregory Hatcher, Technical Staff Members, The MITRE Corporation, Washington, D.C.

6 Application of ATIS Technologies

Craig Gardner, President, Gardner Engineering Associates, Walnut Creek, California, presiding

- **In-Vehicle Navigation with Standard Portable PC****

Larry Sweeney, Vice President, Intelligent Transportation, Alan Norman, Vice President, Automotive Products and Marvin White, Vice President, Commercial Solutions, Etak Inc., Menlo Park, California

- **Development of the Simple Display In-Vehicle Information System Using Infra-Red Beacon****

Akihiko Nojima, Assistant Manager, Toyota Motor Corporation, Toyota, Aichi, Japan; Yasunari Iwata, Toyota Motor Corporation; Kazuo Hirano, Sumitomo Electric Industries, Ltd.

- **ACCESS: An In-Vehicle ATIS Prototype Employing Real-Time Traveler Information, Advanced Visual Display Techniques, Synthesized Speech & Recognition****

Aram Stein, Graduate Student Researcher, University of California, Davis, California

7 Transit and Ridesharing

Mike Bolton, General Manager, Capital Metropolitan Transportation Authority, Austin, Texas, presiding

- **Advanced Interfaces for a Multi-Optional Real-Time Ride Share System****

Prasuna Reddy, Research Associate, Paul P. Jovanis and Ryuichi Kitamura, Institute of Transportation Studies, University of California, Davis, California

- **Transit's Role in the National IVHS Architecture****

David Caskey, Senior Member of Technical Staff and Philip D. Heermann, Sandia National Laboratories, Albuquerque, New Mexico; Robert S. Ow, Volpe National Transportation Systems Center, Cambridge, Massachusetts

- **A Prototype ATIS for Transit and Ridesharing Information****

Brian Benson, Senior Fellow, George Mason University, Fairfax, Virginia; Jonathan Gifford, Associate Professor and Tim Seest, Research Fellow, The Institute of Public Policy, George Mason University, Fairfax, Virginia

3:00 pm

Refreshment Break in Exhibit Hall

3:30 pm

Concurrent Sessions

8 A Deployment Vision for ATMS

Gene Ofstead, Assistant Commissioner, Minnesota Department of Transportation, Minneapolis, Minnesota, presiding

- **A National Division for ATMS Deployment**

Toni Wilbur, Transportation Specialist, Joint Program Office, Federal Highway Administration, Washington, D.C.

- **Critical ATMS Deployment Issues**

Robert Franklin, Transportation Systems, TRW, Atlanta, Georgia

- **ATMS Deployment at a Local Level**

Douglas Wiersig, Executive Director, Houston Traffic Management Center, Houston, Texas

9 Addressing Institutional Issues

Chip White, Professor and Chair, Department of Industrial and Operations Engineering, University of Michigan, Ann Arbor, Michigan, presiding

- **The Los Angeles County Metropolitan Transportation Authority's Signal Support Group****

Bill Dvorak, Sr. Transportation Planner, DKS Associates, Los Angeles, California; Peter H. Liu, Program Manager, Los Angeles County MTA, Los Angeles, California

- **IVHS Operations and Maintenance Issues****

Raman Patel, Chief, Systems Engineering, New York City Department of Transportation, Long Island, New York

- **Institutional & Political Issues in Congestion Pricing: New Models for Federal, State and Local Cooperation in Infrastructure Investment****

Lee Munnich, Senior Fellow and Director, State and Local Policy Program, Candace Campbell, Fellow, Gary DeCramer, Fellow, Barbara Rohde, Research Fellow, Herbert Mohring, Professor, David Van Hattum, Research Assistant and Frank Douma, Research Assistant, State and Local Policy Program, Hubert Humphrey Institute of Public Affairs, University of Minnesota, Minneapolis, Minnesota

10 System Architecture Applications

Rick Schuman, Director, System Integration, ITS AMERICA, Washington, D.C., presiding

- **Computer Aided Emergency Call Management System****

Erick Bourdin, Director of Business Development, Alcatel Alsthom/Alcatel ISR, Evry, France

- **What ATIS Applications Need From an ITS System Architecture****

Clay Collier, Technical Director, SEI Information Technology, Plymouth, Michigan

About ITS AMERICA

The Intelligent Transportation Society of America, a non-profit educational and scientific society, coordinates and fosters the identification, development, integration, and deployment of advanced surface transportation systems.

Our members are organizations and firms in the transportation, communications, and electronics industries; federal, state, regional, and local government agencies; universities and research institutions, and societies and associations in related fields. The U.S. Department of Transportation has designated ITS AMERICA a utilized Federal Advisory Committee.

To Join ITS AMERICA

ITS AMERICA is inclusive, not exclusive. Your organization is welcome to join the growing number of agencies, companies, academic institutions, and public interest groups that come together under the "big tent" of ITS AMERICA to make their voices heard in intelligent transportation systems policymaking, development, and deployment. Membership is open to public and private organizations from any country in the world. Members receive key ITS documents and qualify for discounts on meetings and publications. A highly useful tool is your free access to the on-line International ITS Information Clearinghouse.

**To join ITS AMERICA,
call Membership
Director
Paul Gannon at
202/484-2894**

**Wednesday, March 15
(Continued)**

System Architecture Applications (continued)

- **Architecture Methodologies and ITS Integration Issues****

Kevin Hoffman, Systems Engineer, ITS AMERICA, Washington, D.C.

11 Driver Behavior and Safety

Rich Deering, Crash Avoidance Technical Planner, General Motors, Warren, Michigan, presiding

- **Auditory Icons for Collision Avoidance Warnings****

Robert Graham, Project Associate, S. Hirst and C. Carter, HUSAT Research Institute, Loughborough University of Technology, Leicestershire, United Kingdom

- **Design of a Recurrent Neural Network for Analyzing Route Choice Behavior in the Presence of an Information System****

Prasuna Reddy, Research Associate, Kenneth M. Vaughn, Mohammed A. Abdel-Aty, Post Graduate Research Engineer, Ryuichi Kitamura, Professor and Paul P. Jovanis, Associate Director, Institute of Transportation Studies, University of California Davis, California

- **Analysis of Target Crashes and Potential IVHS Countermeasures****

Wassim Najim, Electronics Engineer, Mark S. Mironer, Engineer and Lynn C. Fraser, Accident Prevention Division, Volpe National Transportation Systems Center, Cambridge, Massachusetts

12 Telecommunications Part 2

Frank Mammano, Chief, Electronic Systems Branch, Federal Highway Administration, McLean, Virginia, presiding

- **Intelligent Transportation Systems Communications: Review of the Transportation Research Board's Communication Committee Mid-Year Workshops****

Walter Albers, President, Albers Systems Inc., West Bloomfield, Michigan

- **Implementation of a Mobile Data System****

Walt Eccles, Radio Engineer, New York State Thruway Authority, Albany, New York

- **The Benefits of Optical Fiber vs. Copper or Coaxial Transmission Media in IVHS Systems****

Bruce Abernathy, Regional Vice President, Kimley-Horn Associates, Dallas, Texas; Dale Niebur, Product Line Manager, Corning Inc., Corning, New York; Mikel A. Richards, Market Development Manager, Siecor Corporation, Hickory, North Carolina

13 ATIS Technology and ITS Applications

Lawrence Sweeney, Vice President, Intelligent Transportation, Etak, Inc., Menlo Park, California, presiding

- **Fully Integrated Weather Warning Systems****

Jeffery Gaber, Marketing Director and Farhad J. Pooran, Research Engineer, Farradyne Systems, Inc., Rockville, Maryland

- **The Accuracy of Vehicle Probe Link Travel Time and Speed Data****

Hesham Rakha, Post Doctoral Fellow, and M. Van Aerde, Associate Professor, Department of Civil Engineering, Queens University, Kingston, Ontario, Canada

- **National Architecture Considerations for Rural ATIS****

Michael E. Krueger, Senior Associate, JHK & Associates, Anaheim, California; Moe Zarean, Principal Engineer, JHK & Associates, Norcross, Georgia; Davey Warren, Highway Research Engineer, Federal Highway Administration, McLean, Virginia

14 Developing a State Chapter

Josie Plachta, Manager State Chapters Programs, ITS AMERICA, Washington, D.C., presiding

Panelists:

- Mike Blumer, ITS Minnesota, IVHS Director, US West, Stillwater, Minnesota

- Adrian Tentner, ITS Midwest, Director of IVHS Initiative, Argonne National Laboratory, Argonne, Illinois
- Mike Costa, ITS Massachusetts, Manager of ITS Traffic Operations, Massachusetts Highway Department, Boston, Massachusetts
- Frank Carlile, ITS Florida, Assistant Secretary for Planning and Engineering, Florida Department of Transportation, Tallahassee, Florida
- John West, Chief, California Alliance for Advanced Transportation Systems, Sacramento, California

15 **Methods for Performance Evaluations of ATMS and ATIS Strategies**

Hani S. Mahmassani, Professor, University of Texas, Austin, Texas, presiding

Presenters:

- **Evaluation of Network Performance under ADVANCE**

David E. Boyce, Director, Urban Transportation Center, University of Illinois at Chicago, Chicago, Illinois

- **The MIT Simulator and Evaluation of Boston Central Artery Intelligent Corridor**

Moshe Ben-Akiva, Director of IVHS Research Program, Department of Civil Engineering, MIT, Cambridge, Massachusetts

- **Evaluation of ATMS/ATIS Benefits in a Day-to-day Framework**

Ta-Yin Hu and Hani S. Mahmassani, Professor, Department of Civil Engineering, The University of Texas at Austin, Austin, Texas

Panelists:

- Daniel Brand, Vice President, Charles River Associates, Boston, Massachusetts
- Paul P. Jovanis, Associate Director, Institute of Transportation Studies, University of California, Davis, California

5:00 pm

Sessions Adjourn for the Day

5:45 - 6:45 pm

Reception in Exhibit Hall

Thursday, March 16

Optional Technical Facility Tours

See page 26 for schedule

Technical Committee Meetings

See page 23 for schedule

7:00 am

Registration/Message Desk

7:15 am

16 **Annual Business Meeting Breakfast**

James Costantino, Executive Director, ITS AMERICA, Washington, D.C., presiding

Board of Directors Elections

- William Powers, Chair, 1995 Nominating Committee, and Executive Director of Research, Ford Motor Company, Dearborn Michigan

Executive Director's Report

- James Costantino

Treasurer's Report

- John J. Fearnside, Treasurer

Introduction of Speaker

- Robert MacLennan, General Manager, Houston MTA, Houston, Texas

Invited Speaker

- The Honorable Bud Shuster, (R-PA.), Chairman, Committee on Transportation and Infrastructure, Washington, D.C.

ITS AMERICA has:

- Developed the authoritative *Strategic Plan for Intelligent Transportation Systems in the United States* as the overall vision for advanced transportation systems development and deployment through the year 2011.
- In partnership with the U.S. DOT, developed the *National Program Plan for ITS* to guide U.S. intelligent transportation system deployments over the next five years.
- With similar organizations from around the world, organized and sponsored the First World Congress on Applications of Transport Telematics and Intelligent Transport Systems held in Paris, with future Congresses scheduled for Yokohama, Japan in 1995 and Orlando, Florida in 1996.
- Launched a National ITS Public Education and Outreach Program to prepare the American marketplace for ITS technologies.
- Mobilized more than 2,000 ITS leaders who donate thousands of hours of expertise every year to ITS AMERICA technical committee and task force deliberations to advance the development and deployment of intelligent transportation systems.
- Developed and operates the International ITS Information Clearinghouse.
- Initiated a network of ITS AMERICA State Chapters.

**Thursday, March 16
(Continued)**

8:30 am

Concurrent Sessions

17 ATMS Applications

*Les Jacobson, Traffic Services Manager,
Department of Transportation, Seattle,
Washington, presiding*

- **The Miami Method: Using Automatic Vehicle Location (AVL) for Measurement of Roadway Level-of-Service****

Amy E. Polk, ITS Research Associate and
Michael C. Pietrzyk, ITS Program Manager,
Center for Urban Transportation Research,
Tampa, Florida

- **ATMS Universal Traffic Operation Simulation****

John Gilmore, Senior Scientist, Georgia
Technical Research Institute, Atlanta,
Georgia; Stefan P. Roth, Research Scientist
Harold C. Forbes and Kevin A. Payne,
Artificial Intelligence Group, Georgia
Institute of Technology, Atlanta, Georgia

- **The Traffic Management Laboratory: A State-of-the Tool for ATMS**

Al Santiago, Highway Research Engineer,
Federal Highway Administration, McLean,
Virginia

18 Issues and Models for Public/Private Partnerships

*Steve Lockwood, Vice President, Parsons
Brinkerhoff, Rockville, Maryland, presiding*

Panelists:

- Sol Glasner, General Counsel, The MITRE Corporation, McLean, Virginia
- Craig Roberts, Director of Institutional and Legal Issues, ITS AMERICA, Washington, D.C.
- Harry Voccola, Senior Vice President, Lockheed IMS, Teaneck, New Jersey
- Linda Spock, Program Director, ETC Project, Port Authority of New York and New Jersey, Upper Montclair, New Jersey

19 Making the Connection Between ITS System Architecture and Standards

*Richard Weiland, General Manager, SEI
Technology Group, Rosemont, Illinois,
presiding*

Panelists:

- Ron Heft, Defense and Civil Information Systems Engineer, JPL, Washington, D.C.
- Allan Kirson, Director of Technology, Motorola, Inc., Northbrook, Illinois
- Ronald Knockeart, Vice President, IVHS North America, Siemens Automotive, Auburn Hills, Michigan
- Robert E. Parsons, Principal, Parsons Transportation Associates, Midlothian, Virginia
- Max Rumbaugh, Executive Vice President, Society of Automotive Engineers, Warrendale, Pennsylvania
- Lee Simmons, Program Management & System Engineer Division, Federal Highway Administration, Washington, D.C.

20 Automated Highway System Developments

*William Spreitzer, Technical Director,
General Motors IVHS Program Office,
General Motors Corporation, Warren,
Michigan, presiding*

- **Roadway Deployment Issues & Risks of Automated Highway Systems****

Dave Bruggeman, Vice President, BRW Inc., Phoenix, Arizona

- **Precursor Systems Analysis of Automated Highway System (AHS) - Automated Check-In****

David Blancett, Manager Systems Analysis,
Northrop Grumman Corporation, Pico
Rivera, California

- **Highway Automation Using Platoons****

Steven Shladover, PATH Deputy Director,
Institute of Transportation Studies, University
of California, Richmond, California

21 CVO and Freight Management

Calvin Grayson, Director, University of Kentucky, Lexington, Kentucky, presiding

• IVHS Trends in Freight Management and CVO Applications**

Cathleen J. Santeiu, Marketing Research Analyst and Richard C. Brown, Director of Operations, Amtech Systems Corporation, Dallas, Texas

• Electronic Issuance of Special Hauling Permits**

Linda Nozick, Assistant Professor and Mark A. Turnquist, School of Civil and Environmental Engineering, Cornell University, Ithaca, New York; George F. List, Department of Civil and Environmental Engineering, Rensselaer Polytechnic Institute, Troy, New York

• IVHS CVO Technology and Its Positive Effect on the Ship-Truck Intermodal Interface**

Richard Easley, Senior Staff Engineer, ITS AMERICA, Washington, D.C. and Erin Flanigan, Project Engineer, HNTB Corporation, Overland Park, Kansas

22 ATIS Consumer Needs & Behavior Part 1

Jane Lappin, Section Chief, EG&G Dynatrend, Volpe National Transportation Center, Cambridge, Massachusetts, presiding

• Dispersion of Traffic Flow Through Provision of Travel-Time Information on Routes Interconnecting Two Urban Areas**

Hiromasa Taga, Japan Traffic Management Technology Association, Osaka, Japan; Fumihide Seki, Traffic Control Section, Traffic Department, Osaka Prefectural Police Headquarters; Mikio Sugimoto, Traffic Regulation Section, Traffic Department, Kyoto Prefectural Police Headquarters; Ryohei Tanaka and Atsushi Maeoka, SE Center, Traffic Control Systems Division, Information Systems Headquarters, OMRON Corporation

• Understanding the Effect of ATIS on Commuters' Route Choice Decisions**

Mohamed A. Abdel-Aty, Post Graduate Research Engineer, Institute of Transportation Studies, Davis, California; Ryuichi Kitamura, Department of Transportation Engineering, Kyoto University, Japan; Paul P. Jovanis, Associate Director, Institute of Transportation Studies, University of California, Davis, California

• The Public's Interest in and Willingness to Pay for Enhanced Traveler Information as Provided by IVHS in the New York Metropolitan Area**

Peter Harris, President, The Peter Harris Research Group, New York, New York; Carolyn S. Konheim, President, Konheim & Ketcham, Inc., Brooklyn, New York

23 Transit Dispatching and Paratransit Operations

John E. Pappas, Director of Operations, Miami Valley Regional Transit Authority, Dayton, Ohio

• Transit Dispatching System Enhancements Using Military Navigation Radios**

Gregory L. Mayhew, Systems Scientist, Hughes Aircraft Company, Fullerton, California

• Applied Intermodality in a Paratransit Environment**

Diane McQuarrie, Manager, Business Development, Navigation Technologies, Sunnyvale, California; Roberta Gardella, President/CEO, Outreach & Escort, Inc., San Jose, California

• Getting SMARTer with ITS: Improved Paratransit Operations Using Integrated Scheduling and Dispatch and Automatic Vehicle Location at SMART**

Mac Lister, Manager of Information Systems, Suburban Mobility Authority for Regional Transportation, Detroit, Michigan; Carol L. Schweiger, EG&G Dynatrend Inc., Burlington, Massachusetts; Ian Keaveny, UMA Systems Inc., Mississauga, Ontario, Canada

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Secretary
Director
California Department of
Transportation

Ex Officio

James Costantino
Executive Director
ITS AMERICA

**Thursday, March 16
(Continued)**

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Chair
Technical Director
General Motors IVHS
Program Office
General Motors
Corporation

C. Michael Walton
Vice Chair
Chairman of Civil
Engineering
University of Texas
at Austin

Susan B. Lauffer
Secretary
Director
Office of Traffic
Management/IVHS
Applications
Federal Highway
Administration

24 Market Analysis and User Acceptance

*Sigmund Silber, Principal, Sigmund Silber
and Associates, Stamford, Connecticut,
presiding*

• IVHS User Acceptance Research at the U.S. Department of Transportation**

Carol Zimmerman, IVHS Program Manager,
Battelle, Washington, D.C.; Cynthia A. Elliot,
Team Leader, Institutional and Legal Issues,
U. S. Department of Transportation,
Washington, D.C.

• IVHS Market Analysis Minnesota Guidestar's Project Genesis A Case Study**

Gary M. Silverman, Partner, SV
International Inc., Chicago, Illinois; Michael
Sobelewski, Guidestar Marketing Director,
Minnesota Department of Transportation &
Strategic Initiatives, St. Paul, Minnesota

• Older Driver Safety Interventions: A Human Factors Approach Utilizing a Structured Taxonomy**

Richard J. Hanowski, Research Scientist,
Battelle Human Factors Transportation
Center, Seattle, Washington; Ronald R.
Knippling, Engineering Research
Psychologist, National Highway Traffic
Safety Administration, Office of Crash
Avoidance Research, Washington, D.C.;
Evan A. Burne and Raja Parasuramann,
Catholic University of America,
Washington, D.C.

10:00 am

Refreshment Break in Exhibit Hall

10:30 am

Concurrent Sessions

25 ATMS Field Experiences

*Gordon Fink, Director, Research and
Technology, ITS AMERICA, Washington,
D.C., presiding*

• Targeting Freeway and Arterial Integration Through FAST-TRAC**

James C. Barbaresso, Director, Planning and
Development, Road Commission for
Oakland County, Beverly Hills, Michigan;
Thomas Mullin, Michigan Department of
Transportation, Detroit, Michigan; Terry L.
Kemp, Engineering Specialist, Rockwell,
Troy, Michigan

• Portable Traffic Management System — An IVHS Operational Test**

Marthand Nookala, Research Engineer,
Minnesota Department of Transportation, St.
Paul, Minnesota; Gary Thompson, Assistant
Division Engineer, Minnesota Department of
Transportation, Roseville, Minnesota;
William L. Troe, Senior Transportation
Planner, BRW, Inc., Minneapolis, Minnesota

• CCTV Camera Site Selection — A Field Experience**

Leo Lee, Senior Vice President, Mathews
Zachariah, Associate Transportation
Engineer and Peter Everett, Associate
Transportation Engineer, DKS Associates,
Los Angeles, California

26 ITS Impact with NAFTA

*Sadler Bridges, Executive Associate
Director, Texas A&M University, College
Station, Texas, presiding*

Panelists: TBA

27 Progress in Developing ITS Architecture

*Robert Parsons, Principal, Parsons
Transportation Associates, Midlothian,
Virginia, presiding*

Panelists:

- Don Savitt, Senior Scientist, Hughes
Aircraft, Fullerton, California
- Ken Schreder, Technical Director,
Rockwell International, Anaheim,
California
- Bob McQueen, Associate Director,
Halcrow Fox Associates, London, United
Kingdom
- Rob Jaffe, Program Manager, Loral,
Yorktown, New York
- Dick Worsham, Deputy Director,
Westinghouse Electronics, Linthicum,
Maryland

- Masakazu Iguchi, Executive Director, VERTIS, Tokyo, Japan

28 Advanced Vehicle Control

P. Iaonnou, Professor, University of Southern California, Los Angeles, California, presiding

- **Comparison of Engine Models and Distance Sensors for Vehicle Longitudinal Control: Analysis and Test Results in PATH****

Sei-Bum Choi, California PATH, and J.K. Hedrick, Professor, Department of Mechanical Engineering, University of California at Berkeley, Berkeley, California

- **A State-Constrained Approach to AHS: Vehicle Following Control****

Thomas J. Urban, Associate Staff, A. J. Pue and H. Y. Chiu, Johns Hopkins University, Applied Physics Laboratory, Laurel, Maryland

- **A Framework for Intelligent Sensor Validation, Sensor Fusion and Supervisory Control of Automated Vehicles in IVHS****

Alice M. Agogino, Professor, Kai Goebel and Satnam Alag, Department of Mechanical Engineering, University of California at Berkeley, Berkeley, California

29 ITS and CVO: Real-Time Safety

Stephen Crane, Manager, IVHS/CVO, Federal Highway Administration, Washington, D.C., presiding

- **Voice-Linked Expert Inspection System****

Frank P. Blair, Vice President, The Vlexis Group, Inc., Arlington, Virginia

- **ITS Brake Testing Devices**

Steve Shaffer, Battelle Research Scientist, Battelle, Columbus, Ohio

- **Colorado Dynamic Truck Speed Warning System**

Greg Fulton, Planning Grants Officer V, Colorado Department of Transportation, Denver, Colorado

30 ATIS Consumer Needs & Behavior, Part 2

Ellen Williams, President, Ellen Williams and Associates, Concord, California, presiding

- **Driver Acceptance of System Features in an Advanced Traveler Information System (ATIS)****

John Campbell, Research Scientist, Rhonda A. Kinghorn and Barry H. Kantowitz, Director, Battelle Human Factors Transportation Center, Seattle, Washington

- **Demand for a Pre-Trip ATIS Conditioned upon Communications Media: A Stated Preference Analysis****

Patrick Beaton, Professor and Amit Sadana, Center for Transportation Studies and Research, Newark, New Jersey

- **America ATIS Committee Reports: Current Status, Future Directions**

Joel Markowitz, Federal Highway Administration Regional ITS Specialist, San Francisco MTC, Oakland, California

31 State Chapters Outreach

Harry Voccola, Senior Vice President, Lockheed IMS, Teaneck, New Jersey, presiding

Panelists:

- **Reaching Out To Local Governments**

Brent Bair, IVHS Michigan, Managing Director, Road Commission for Oakland County, Beverly Hills, Michigan

- **Reaching Out To Consumers**

Dennis Foderberg, Board of Directors, ITS Minnesota, Director, IVHS Minnesota, University of Minnesota, Minneapolis, Minnesota

- **Reaching Out To The Media**

Phyllis Radlinski, President, IVHS-Ohio and Director, Marketing, Ohio State University, Transportation Research Center, East Liberty, Ohio

- **Reaching Out To Students**

Roger Stough, NOVA Endowed Professor, Intelligent Transportation for Virginia, The Institute for Public Policy, George Mason University, Fairfax, Virginia

Technical Committees

Advanced Public Transportation Systems

Advanced Rural Transportation Systems

Advanced Traffic Management Systems

Advanced Traveler Information Systems

Advanced Vehicle Control Systems

Benefits, Evaluation, and Costs

Commercial Vehicle Operations

Energy and Environment

Institutional Issues

Legal Issues

Safety and Human Factors

Standards and Protocols

System Architecture

Telecommunications

Task Forces

Intermodal

Communications & Outreach

Societal Implications

Travel Demand Management

System Architecture Consensus

**Thursday, March 16
(Continued)**

32 Issues in the Costing of ITS System Architectures

Melvyn Cheslow, Technical Staff, The MITRE Corporation, Washington, D.C., presiding

Panelists

- Susan Jakubiak, Senior Economist, Apogee Research, Bethesda, Maryland
- James Reynold, Associate Vice President, Frederic H. Harris, Inc., Miami, Florida
- Bruce Eisenhardt, Chief Engineer, Loral Federal Systems, Manassas, Virginia
- Jerry Pasternak, Senior Staff Engineer, Hughes Aircraft Company, Fullerton, California
- Tom Druhot, Louis Berger & Associates, McLean, Virginia

12 Noon

33 Awards Lunch

Jack Kay, Chair, 1995 Annual Meeting, presiding

Presentation of Awards

- Lawrence D. Dahms, Chair, Board of Directors
- William Spreitzer, Chair, Coordinating Council
- James Costantino, Executive Director

Introduction of Speaker

Lawrence D. Dahms, Chair, Board of Directors, ITS AMERICA and Executive Director, Metropolitan Transportation Commission, Oakland, California

Invited Speaker

The Honorable Ronald H. Brown, Secretary, United States Department of Commerce, Washington, D.C.

1:30 pm

Concurrent Sessions

34 ATMS: Automated Debiting

Robert E. Ervin, Head, Engineering Research, University of Michigan, Ann Arbor, Michigan, presiding

• Automatic Incident Detection in Urban Tunnels for Light Vehicles Only**

Jerome Geoffray, General Study Department Manager, Cofiroute, Sevres, France

• ADATIS: An Automatic Debiting Application for New Motorway Services**

Fremont Guy, Research & Development Manager and Gerard Charpentier, Cofiroute, Sevres, France; Isabelle Jaquet, Renault, Rueil-Malmaison, France

• Automatic Debiting and Electronic Payment for Transport: The Result of the DRIVE Programme's Adept Project**

Philip T. Blythe, University of Newcastle Upon Tyne, Tyne, United Kingdom

35 ITS and Product Liability

Cynthia J. Moreland, Senior Division Counsel, Motorola, Schaumburg, Illinois, presiding

Panelists:

- Kenneth I. Gluckman, Assistant General Counsel, Office of the General Counsel, Chrysler Corporation, Highland Park, Michigan
- William T. Wilson, Counsel, Siemens Corporation, Schaumburg, Illinois
- Les Holt, Corporate Counsel, Etak, Inc., Menlo Park, California

36 ITS and the Environment

Philip A. Shucet, Assistant Vice President, Michael Baker Jr., Inc., Virginia Beach, Virginia, presiding

• IVHS and the Environment: New Models for Cooperation**

Lee Munnich, Senior Fellow and Director, State and Local Policy Program; Candace

Campbell, Fellow; Gary DeCramer, Fellow; Barbara Rohde, Research Fellow; Frank Douma, Research Assistant; David Van Hattum, Research Assistant, State and Local Policy Program, Hubert H. Humphrey Institute of Public Affairs, University of Minnesota, Minneapolis, Minnesota

- **Using IVHS Technology to Provide Roadside Information on Motor Vehicle Emissions****

Neil Lacey, Research Engineer, Colorado Department of Transportation, Denver, Colorado; Gary A. Bishop, Research Engineer, Donald H. Stedman, Professor and R. Bruce Hutton, Professor, University of Denver, Denver, Colorado

- **Wide-Area Remote Sensing of Air Quality: Impacts of IVHS****

David Hofeldt, Assistant Professor; Sumantra Chakravarty, Research Associate, Mechanical Engineer; Phil Dieck, Research Assistant, Mechanical Engineer; Bernard Olson, Research Assistant, Mechanical Engineer; Kenneth Rubow, Research Associate, Mechanical Engineer; and Virgil Marple, Professor, Mechanical Engineer, University of Minnesota, Minneapolis, Minnesota; William Eichinger, Lidar Scientist, Los Alamos National Laboratory, Albuquerque, New Mexico; Howard Kraye, Research Scientist, Santa Fe Technologies, Albuquerque, New Mexico; Michael Manor, Project Manager, Minnesota Guidestar, Minnesota Department of Transportation, St. Paul, Minnesota

- **Toward an Environmentally Acceptable ITS Policy: Recommendations of a National Conference**

Thomas Horan, Senior Fellow, George Mason University, Fairfax, Virginia

37 AVCS: Radar Systems

Eugene Farber, IVHS Strategy & Planning, Ford Motor Company, Dearborn, Michigan, presiding

- **A Study on Two-Dimensional Millimeter-Wave Radar for Automobiles under the Time Sharing Multibeam Method****

Satoru Komatsu, Chief Engineer, Honda R&D Co., Ltd., Saitama, Japan

- **Radar Brake System****

Yasuhiro Fujita, Deputy General Manager, Honda R&D Co. Ltd., Haga-gun, Tochigi, Japan

- **Radar Based Integrated Vehicle Control****

Umit Ozguner, Professor; Jonathan Young, Associate Director of Electrosience Laboratory, Sergey Drakuov, Senior Research Associate, Lee Henderson, Senior Research Associate and Konur Unyelioglu, Research Associate, The Ohio State University, Columbus, Ohio

38 ITS CVO-Moving Ahead

C. Michael Walton, Chairman of Civil Engineering, University of Texas at Austin, Austin, Texas, presiding

Panelists:

- **Deployment**

Dick Landis, Executive Director, HELP, Inc., Phoenix, Arizona

- **Guiding Principles for Clearance and Operational Concepts**

Gene Bergoffen, President and CEO, National Private Truck Council, Alexandria, Virginia

- **Architecture and Standards**

Timothy Herger, Program Manager, Johns Hopkins Applied Physics Laboratory, Laurel, Maryland

- **NAFTA**

Tom Kozlowski, NAFTA Specialist, Federal Highway Administration OMC, Washington, D.C.

- **Hazardous Materials**

Lee Jackson, Hazardous Materials Specialist, Federal Highway Administration OMC, Washington, D.C.

- **ITS/CVO Benefits/Cost Analysis**

Bob Pritchard, Director Regional Economic Analysis, ATA Foundation, Pawtucket, Rhode Island

39 Operational Tests for Rural Applications

Christopher Hill, Chief Operating Officer, Castle Rock Consultants, Leesburg, Virginia, presiding

- **A Rural Vehicle Emergency Location Service in Colorado****

Alison Brown, President, NAVSYS Corporation, Colorado Springs, Colorado; Jeremy Siviter, Director of Technical Projects, Castle Rock Consultants, Leesburg, Virginia; John Kiljan, IVHS Program Manager, Colorado Department of Transportation, Denver, Colorado

- **Implementation of a Rural ATIS: Initial Findings from the YATI System****

John Gard, Post-Graduate Research Engineer and Paul P. Jovanis, PATH Associate Director, Institute of Transportation Studies, University of California, Davis, California

- **ARTIS Project**

Richard Maddern, Minnesota Department of Transportation, Minneapolis, Minnesota

40 Managing Travel Demand with ITS Technologies: Opportunities for Near-Term Deployment

C. Kenneth Orski, President, Urban Mobility Corporation, Washington, D.C., presiding

Panelists:

- Jim Sims, Executive Director, Commuter Transportation Services, Los Angeles, California
- Richard Golber, President, AGS Group, South Hadley, Massachusetts
- Joan Ravier, Director, Governmental Programs, Metro Traffic Control Inc., San Francisco, California
- Walter Kraft, Senior Vice President, Edwards & Kelcey Inc., Lexington, New Jersey
- Katherine Turnbull, Assistant Director, Texas Transportation Institute, College Station, Texas
- John Sanger, President, Telecommuter Resources, Inc., St. Paul, Minnesota

41 Seeking ITS Benefits

Donald Orne, Director of Transportation Systems, TRW/ESL, Sunnyvale, California, presiding

- **Macro-Level Traffic Simulation and Case Study Development for IVHS System Architecture Evaluation****

Karl Wunderlich, Member of the Technical Staff and John A. Harding, The MITRE Corporation, Washington, D.C.; Michel Van Aerde, Associate Professor and Bruce Hellinga, Department of Civil Engineering, Queen's University, Kingston, Ontario, Canada

- **Route Planning and Guidance: Potential Benefits and Implications for Public-Private Partnerships****

Hong Lo, Assistant Research Engineer, University of California, Richmond, California; Mark Hickman, Assistant Research Engineer and Stein Weissenberger, California, PATH, University of California, Richmond, California; Bin Ran, Massachusetts Institute of Technology, Department of Civil Engineering and Environmental, Cambridge, Massachusetts; Jim Larson, Engineer, Rockwell International, Anaheim, California

- **Simulation of Navigational Waste Associated with Wrong Turns for Alternate Vehicle Displays****

Michel Van Aerde, Associate Professor and H. Rakha, Department of Civil Engineering, Queens's University, Kingston, Ontario, Canada; C. Proter and Robert Sanchez, Research Psychologist, Science Applications International Corporation, Orlando, Florida

3:00 pm

Refreshment Break in Exhibit Hall

3:30 pm

Concurrent Sessions

42 Vehicle Sensing

Gabriel Heti, Manager, Transportation Control and Systems Office, Ontario

Ministry of Transportation, Downsview, Ontario, Canada, presiding

- **Videoimage Sensing for a Smart Diamond Interchange Controller****

N. Kehtarnavaz, Associate Professor, C. Huang and T. Urbanik, Division Head of Transportation System, Texas A&M IVHS Research Center for Excellence, College Station, Texas

- **Vehicle Classification of Acoustic Signals Using Neural Networks****

Robert James, Senior Research Associate, Somkiat Sampan, Graduate Research Assistant, Virginia Tech, Blacksburg, Virginia

- **Detection and Tracking of Traffic Objects in IVHS Vision Sensing Modalities****

Nikolaos P. Papanikolopoulos, Assistant Professor, Charles A. Richards, and Christopher E. Smith, Artificial Intelligence, Robotics and Vision Laboratory, Department of Computer Science, University of Minnesota, Minneapolis, Minnesota

43 ITS Procurement Issues

Julie Dingle, Attorney-Adviser, Federal Highway Administration, Washington, D.C., presiding

- **Making the Procurement Process Work for You in IVHS Deployment****

Vincent P. Pearce, Senior Manager, Transportation Systems & Services, AlliedSignal Technical Services Corporation, Columbia, Maryland

- **Legal and Procurement Issues in Forming Public/Private Partnerships in Minnesota****

Laurie Anderson, Contract Management Officer, Minnesota Department of Transportation, St. Paul, Minnesota

- **A Call for the Review of ITS Procurement Policy from the Perspective of a Systems Integrator****

Clive Gillon, Marketing Director, Alcatel Canada Wire, Inc., Alpharet, Georgia; Leonard Kott, Senior Sales Engineer, Alcatel Contracting (NA), Inc., Alpharetta, Georgia

44 AHS and the Environment

Charles R. Goodman, Transportation Specialist, Federal Highway Administration, Washington, D.C., presiding

- **An Examination of Environmental Issues Associated with Automated Highway Systems****

Mark A. Miller, Transportation Research Specialist, PATH, University of California, Richmond, California

- **Automated Highway System (AHS) Vehicle Emissions: Preliminary Analysis****

Matthew J. Barth, Research Professor, University of California, Riverside, California

- **A New Methodology for Routing Vehicles in IVHS with Environmental Objectives****

Lei Yu, Assistant Professor, Texas Southern University, Houston, Texas; J. A. Steward, Department of Civil Engineering, Royal Military College of Canada, Kingston, Ontario, Canada

45 ITS and Driver Interfaces

August Burgett, Chief, Light Vehicle Dynamics and Simulation Division, Crash Avoidance Research, NHTSA, Washington, D.C., presiding

- **The Detection of Alcohol-Impaired Driving from Vehicle Accelerations and Steering Wheel Inputs****

Geoff Silberman, Senior Professional Staff, and Randall C. Poe, Engineer, Johns Hopkins University, Applied Physics Laboratory, Laurel, Maryland; Stanley E. Young, Kansas Department of Transportation, Office of Transportation Planning, Topeka, Kansas; Lawrence Bachman, Science Applications International Corporation, McLean, Virginia

- **Car-Following Behavior: Effect of Environment****

Shih-Ken Chen, Research Assistant, Thomas B. Sheridan, Professor of Mechanical Engineering, Steven Ahn, Mithran Matthew and

**Thursday, March 16
(Continued)**

ITS and Driver Interfaces (continued)

Miltos Kambouides, Massachusetts Institute of Technology, Cambridge, Massachusetts

- **Human Factors and New Driver Interfaces: Lessons Learned from a Major Research Project****

Paul Green, Research Scientist, University of Michigan, Ann Arbor, Michigan

46 National ITS: A Deployment Strategy

*Thomas Deen, Executive Director (Retired)
TRB, Stevensville, Maryland, presiding*

Panelists:

- H. Douglas Robertson, Director of Plans and Programs, ITS AMERICA, Washington, D.C.
- Christine Johnson Director, ITS Joint Program Office, U.S. Department of Transportation, Washington, D.C.
- William Powers, Executive Director, Ford Motor Company, Dearborn, Michigan
- Patrick Nowak, Director, Michigan Department of Transportation, Lansing, Michigan
- Congressional Staff Representative (TBA)
- Communications Industry Representative (TBA)

47 Advanced Rural Transportation Needs & Opportunities

Dennis Foderberg, Director, IVHS Institute, University of Minnesota, Minneapolis, Minnesota, presiding

- **Rural ATIS Concepts****

Mohsen Zarean, Principal Investigator, Elizabeth N. Williams and R.J. Surgi, Jr., JHK & Associates, Norcross, Georgia; Davey Warren, Federal Highway Administration, McLean, Virginia

- **What is Rural? Intuition or Explicitly for ITS****

Barbara McClure Schroeder, Transportation Department Manager, DeLeuw, Cather & Company, Denver, Colorado; Stephen S. Clinger, Highway Engineer, Federal Highway Administration, Washington, D.C.; Walter J. Sutterlin, Manager, Contract

Operations, Transportation Research Center, East Liberty, Ohio

- **An Assessment of Rural Traveler Needs for the IVHS Applications****

R. Sivanandan, Assistant Director, Virginia Polytechnic Institute, Blacksburg, Virginia; Michael Sobolewski, Market Director, Minnesota Guidestar, St. Paul, Minnesota; Davey Warren, Federal Highway Administration, McLean, Virginia

48 Telecommuting and Ridesharing

Jim Sims, President, Commuter Transportation Services, Los Angeles, California, presiding

- **The Impact of Telecommuting ("The Virtual Office") on Transit Management****

Mary Lind, Associate Professor and Joanne M. Sulek, North Carolina A&T State University, Greensboro, North Carolina

- **Real Time Rideshare Matching with Wireless Access to the Matching Computer****

Ed Walbridge, Adjunct Research Associate, National-Louis University, Oak Park, Illinois

- **ROBIN-An Innovative System for Road Pricing without Infrastructure****

Uwe Albrecht, Mannesmann Pilotentwicklung, Munich, Germany

49 The Direction of ITS Communication

John Stearns, President, Navigation Technology Corporation, Sunnyvale, California, presiding

Panelists:

- Mike Sobolewski, Market Director, Minnesota Guidestar, St. Paul, Minnesota
- Jonathan Slevin, Director of Communication, ITS AMERICA, Washington, D.C.
- Shelly Lynch, Highway Engineer, Program Management and Systems Engineering Division, Federal Highway Administration, Washington, D.C.

- Susan Lancaster, Manager
Communications, Texas Transportation
Institute, College Station, Texas
- John Cox, Council Member, City of
Newport Beach, Newport Beach, California
- Brian Benson, Professor, George Mason
University, Fairfax, Virginia

5:00 pm

Sessions Adjourn for the Day

Friday, March 17

Optional Technical Facility Tours
See page 26 for schedule

7:00 am

Registration/Message Desk

7:15 am

Continental Breakfast

8:30 am

Concurrent Sessions

50 Advanced Traffic Management

*Jeff Lindley, Urban Transportation
Specialist, Federal Highway Administration,
Washington, D.C., presiding*

- **Portland's Advanced Traffic
Management System Plan****

Ransford McCourt, Principal, DKS
Associates, Inc., Portland, Oregon

- **Maryland State Highway
Administration's Chart Traffic
Management Center System****

Jeffrey E. Randall, Principal Engineer, JHK
& Associates, Inc., Baltimore, Maryland;
Robert G. Rausch, JHK & Associates, Inc.,
Norcross, Georgia; Stephen R. Kuciemba,
Chief, Maryland State Highway
Administration, Hanover, Maryland

- **Seattle ATMS - A Multi-Jurisdictional
Information System For Traffic****

Roy Sumner, Senior Vice President,
Farradyne Systems, Inc., Rockville,
Maryland; Leslie Jacobson, Urban Systems
Engineer and David B. Berg, Systems
Engineering, Washington Department of
Transportation, Seattle, Washington

51 Procurement Issues

*Cindy Elliot, Institutional and Legal Team
Leader, Federal Highway Administration,
Washington, D.C., presiding*

- **Opportunities for Defense Conversion:
Nurturing & Negotiating Public-Private
Partnerships****

Christine Peterson, Director, Program
Development and D.S. Olson, Assistant
Director, Program Development Group, SRI
International, Arlington, Virginia

- **Use of a System Contractor for the
Design, Procurement and Installation of
Adverse Visibility Warning System****

Sara Colosimo, Research Project Manager,
Utah Department of Transportation, Division
of Research and Development, Salt Lake
City, Utah

- **Applying DOD Procurement
Experience to Highway Planning****

Gene P. O'Neill, Manager, IVHS Programs,
New York State Thruway Authority, Albany,
New York

52 Developing Standards

*George Schoene, Chief, Operational Test
Division, Federal Highway Administration,
Washington, D.C., presiding*

- **The Development of Standards for
Traffic/Travel Information Exchange****

Jonathan Booth, Castle Rock Consultants,
Nottingham, United Kingdom; Giuliano
Trenta and Jonathan Booth, ERTICO,
Brussels, Belgium

- **The Application of Open Systems
Standards to IVHS A Case Study:
Caltrans District 7****

Jim Kerr, Vice President, West Coast
Operations, National Engineering Technology
Corporation, La Mirada, California; Pat

**Friday, March 17
(Continued)**

Developing Standards (continued)

Perovich, Chief-IVHS Development Branch and Al Martinez, Project Engineer-IVHS Development Branch, Caltrans District 7, Los Angeles, California; Greg Mosley, Manager, Software & Computer Systems Development, National Engineering Technology Corporation, La Mirada, California

• Report on User Requirements for Electronic Toll and Traffic Management

Stanley Ciszewski, Telecommunications Systems Engineer, New Jersey Highway Authority, Woodbridge, New Jersey

53 The AHS Consortium and Its Program

Lyle Saxton, Director, Safety and Traffic Operations, R&D Federal Highway Administration, McLean, Virginia, presiding

Panelists:

- Richard Bishop, IVHS Research Division, Federal Highway Administration, McLean, Virginia
- Eugene McCormick, Senior Vice President, Parsons Brinckerhoff International Inc., Washington, D.C.
- Jim Rillings, Research Fellow, General Motors Corporation, Warren, Michigan
- Walter Faulconer, Manager IVHS Projects, Martin Marietta, Denver, Colorado

54 Telecommunications Part 3

Ross Sorci, Manager of Research, ITT Research Institute, Lanham, Maryland, presiding

• VSAT - When the Sky is the Limit**

Najib O. Habesch, Senior Engineer, JHK & Associates, Hartford, Connecticut; Karen M. Jehanian, Urban Engineers, Inc., Philadelphia, Pennsylvania

• Teletrac Technology - Providing Wireless IVHS User Services**

Gary Russell, Senior Project Engineer, and John Mango, AirTouch Teletrac, Garden Grove, California

• CDPD as a Natural Platform for Wide-Area IVHS Applications**

Jorge M. Pereira, Senior Member of Technical Staff, GTE Laboratories Inc., Waltham, Massachusetts; Richard Weiland, General Manager, SEI Technology Group, Rosemont, Illinois; Khaled Dessouky, GTE Laboratories, Inc., Waltham, Massachusetts

55 ATIS Projects Part 1

Joel Markowitz, Federal Highway Administration Regional ITS Specialist, San Francisco MTC, Oakland, California, presiding

• Minnesota Guidestar Project Travlink*

James Wright, Program Director, Minnesota Guidestar; Marilyn Remer, Project Manager, Minnesota Department of Transportation, St. Paul, Minnesota; Ferrol O. Robinson, Principal, Strgar-Roscoe-Fausch, Inc., Minneapolis, Minnesota

• ADVANCE — Initial Deployment**

Syd Bowcott, Chief Engineer, IVHS Programs, DeLeuw, Cather & Company, Schaumburg, Illinois; Joseph Ligas, IVHS Program Manager, Illinois Department of Transportation, Schaumburg, Illinois

• TravInfo: A Progress Report**

Melanie Crotty, Travinfo Project Manager and Jeff Georgevich, Advanced System Application Senior Planner, Metropolitan Transportation Commission, Oakland, California; Lawrence E. Sweeney, Jr., Chair, TravInfo Advisory/Steering Committees and Kenji Kamiya, Director, Asia/Pacific Business Development, Etak, Inc. Menlo Park, California

56 Bus Priority and Ride Tracking

Lawrence Schulman, Associate Administrator Technical Assistance, Federal Transit Administration, Washington, D.C., presiding

• Ride Tracking Project**

Robert Tanenhaus, President, Information Management International, Inc., Bethesda, Maryland

• Bus Priority at Traffic Signals in Portland: The Powell Boulevard Pilot Project**

William Kloos, Director of Advanced Traffic System and Alan R. Danaher, Kittleson & Associates, Portland, Oregon; Katharine M. Hunter-Zaworski, Assistant Professor, Oregon State University, Corvallis, Oregon

- **A Comparative Analysis of Two Methods to Assess Traffic Operational Consequences of Bus Preemption****

Snehamay Khasnabis, Professor of Civil Engineering and Bill Alan Cisco, Graduate Research Assistant, Wayne State University, Detroit, Michigan

57 Outreach Success Stories

Chalmers "Hap" Carr, Program Manager, AlliedSignal Inc., San Antonio, Texas, presiding

- **Success With Voters and Government Agencies (Oakland County/Fast-Trac)**

Brent Blair, Managing Director, Road Commission for Oakland County, Beverly Hills, Michigan

- **Success With a Consumer Population (I-95 Users)**

Elizabeth Voras, Administrative Manager, I-95 Corridor Coalition, Harrisburg, Pennsylvania

- **Success with an Industrial Population (Fleet Operators and Truck Drivers)**

Hamby Hutcheson, Program Director, The Intelligent Truck Project, Miami, Florida

- **Selling the Public on IVHS/ITS**

Jeanne Janes, Vice President, Director of Public Relations, Anderson Advertising, San Antonio, Texas

10:00 am

Refreshment Break in Exhibit Hall

10:30 am

Concurrent Sessions

58 Integrated Transportation Management

Dennis C. Judycki, Associate Administrator for Safety and Systems Applications, Federal

Highway Administration, Washington, D.C., presiding

- **Integrated Transportation Management Centers****

Carol L. Schweiger, Senior Transportation Analyst, EG&G Dynatrend, Inc., Burlington, Massachusetts

- **Emergency IVHS Deployment for the Northridge Earthquake - An Early Winner****

Jim Kerr, Vice President, West Coast Operations, National Engineering Technology Corporation, La Mirada, California; Patricia Perovich, Chief-IVHS Development Branch and Al Martinez, Project Engineer-IVHS Development Branch, Caltrans District 7, Los Angeles, California; A. Frank Cechini, Information Systems/IVHS Manager, Federal Highway Administration, Sacramento, California; Carla Simone, Transportation Systems Engineer, National Engineering Technology Corporation, LaMirada, California

- **Texas Department of Transportation: TransGuide-Transportation Guidance System San Antonio, Texas: Technology in Motion****

Patrick McGowan, Traffic Management Engineer and Patrick L. Irwin, Director of Transportation, Texas Department of Transportation, San Antonio, Texas

59 Institutional Issues and Early Deployment

Susan B. Lauffer, Director, Office of Traffic Management/IVHS Applications, Federal Highway Administration, Washington, D.C., presiding

- **Institutional Issues & Jurisdictional Cooperation Model—The Portland IVHS Early Deployment Plan****

Leo Lee, Vice President and Ransford McCourt, Principal, DKS Associates, Los Angeles, California

- **Salt Lake Valley ITS Early Deployment: Comparable Needs, Unique Opportunities****

Sara R. Colosimo, Research Project Manager, Utah Department of Transportation Research and Development

**Friday, March 17
(Continued)**

Institutional Issues and Early Deployment (continued)

Division, Salt Lake City, Utah; Barbara McClure Schroeder, Senior IVHS/Transportation Engineer, DeLeuw, Cather & Company, South Jordan, Utah

- **The French Road Information Centres Dialogue and Partnership Between Public Authorities and Private Operations****

Thierry Vexiau, Special Adviser of the Director, Ministere de l'Equipeement, des Transportation et du Tourisme, Paris, France

60 Societal Issues and ITS

Michael Martin, Director, BDM International Inc., McLean, Virginia, presiding

- **Assessment of IVHS Impact in the Minority Community****

Anthony A. Saka, Assistant Professor, Morgan State University, Baltimore, Maryland

- **Intelligent Vehicle-Highway Systems: Technology Assessment and Directions for Social Science Research****

Stefano M. Stefan, Graduate Student, University of California, Irvine, California

- **Societal Issues in Intelligent Transportation Systems: What are they? Why are they important? What can we do about them?*****

Barbara Richardson, Research Scientist, University of Michigan Transportation Research Institute, Ann Arbor, Michigan

61 AHS Issues

Steve Shladover, PATH Deputy Director, PATH Institute of Transportation Studies, University of California, Richmond, California, presiding

- **Combined Vehicle Motion Control — A Gain Scheduling Approach**

Jie Yu, Graduate Student, Department of Mechanical Engineering and Athanasios Sideris, Department of Mechanical and Aerospace Engineering, University of California, Irvine, California

- **Toward a Macroscopic Formulation Approach for Dynamic Traffic Flow on an AHS**

Bin Ran and H.S. Jacob Tsao, Institute of Transportation Studies, PATH, University of California, Richmond, California

- **Infrastructure Deployment Issues Associated with Automated Highway Systems in Urban Areas**

Younghbin Yim and Mark Miller, PATH, Institute of Transportation Studies, University of California, Berkeley, Richmond, California; Paul A. Hellman and Mohammad Sharafsaleh, Institute of Transportation Studies, University of California, Berkeley, California

62 Transportation Appropriations

Representative Frank Wolf (R-Va.), the incoming chairman of the Appropriations Subcommittee on Transportation and Related Agencies has been invited to hold a hearing. A panel of ITS leaders will promote the achievements of the ITS program to date and discuss the challenges to deployment.

63 Smart Payment Systems for Transit

Ron Fisher, Transportation Consultant, Federal Transit Administration, McLean, Virginia, presiding

Panelists:

- Wayne Spaulding, Assistant Director for Program Development and Evaluation, Delaware Transportation Authority, Dover, Delaware
- Raymond Rebeiro, President, Echelon Industries Inc., Walnut, California
- Catherin Allen, Vice President Business Development and Alliances, Citicorp, New York, New York
- David L. deKozan, Director of Marketing, CUBIC, Vienna, Virginia
- Carol L. Schweiger, Senior Transportation Analyst, EG&G Dynatrend, Burlington, Massachusetts

12 Noon

Box Lunch in Exhibit Hall

1:30 pm

Concurrent Sessions

64 ATMS and Area Traffic Management

Thomas Griebel, Assistant Executive Director, Multimodal Transportation, Texas Department of Transportation, Austin, Texas, presiding

- **State-of-the-Art Traffic Management: Its Impact on Funding Grants & Political Decisions****

Daryl Taavola, Engineer, City of Pasadena, Pasadena, California; Serop Der-Boqhossian, Associate Vice President, JHK & Associates, Pasadena, California

- **A Framework for Local Area Field-Integrated Control Subsystems Using the Advanced Transportation Controller****

Rick Pratt, Systems Manager and James Reynold, Associate Vice President, Frederic R. Harris, Inc., Miami Lakes, Florida

- **ATMS and Wide-Area Traffic Management****

Cesar Perez, Contracting Officer's Technical Representative, Federal Highway Administration, McLean, Virginia; Barry A. Grasso, Michael T. Ward and Gardiner A. Hall, Loral AeroSys, Seabrook, Maryland; Amir Eiger, The Analytic Sciences Corporation, Arlington, Virginia

65 Institutional Issues in Traffic Management Deployment

Cindy Niekamp, Director, Transportation System Business Unit, TRW Inc., San Diego, California, presiding

Panelists:

- Joe Stepleton, Deputy Traffic Engineer, Georgia Department of Transportation, Atlanta, Georgia
- Leon Walden, Transportation Engineer II, Kentucky Department of Transportation, Frankfort, Kentucky
- Patrick Irwin, Director of Transportation Operations, Texas Department of Transportation, San Antonio, Texas

- Joel Markowitz, Federal Highway Administration Regional ITS Specialist, San Francisco MTC, Oakland, California

66 Advanced Vehicle Control Systems

William Leasure, Director, Office of Crash Avoidance, NHSTA, Washington, D.C., presiding

- **Automatic Driving in Stop and Go Traffic****

Michel Parent, Director of Research and Pascal Daviet, INRIA, Le Chesney, France; Michael Parent, Jean-Christophe Denis, INRIA; Tarek M. Saada, Ecole de Mines de Paris, Cedex, France

- **Adaptive Cruise Control for Heavy Duty Vehicles****

Shubhayu Chakraborty and Daniel G. Smedley, Eaton Corporation, Corporate Research and Development, Southfield, Michigan

- **Improvements Concerning Safety Through Deceleration Control and Road Preview****

Kenneth Yoshioka, Research Engineer, Mitsubishi Motors Corporation, Okazaki, Aichi Pref, Japan; Kazuya Hayafune and Hiroaki Yoshida, Electronics Research, Mitsubishi Motors Corporation, Japan

67 Human Factors and ITS Systems

George Parker, Associate Administrator for R&D, NHTSA, Washington, D.C., presiding

- **Driver Task Analysis and Driver-System Interface Designs for the Automated Highway System****

Lee Lavitan, Senior Principal Research Scientist, Thomas A. Plocher and Robert E. Demers, Honeywell, Minneapolis, Minnesota

- **Support System for an Advanced Traffic Management System: Human Information Requirements****

Deborah Mitta, Dennis J. Folds, Senior Research Scientists and Michael J. Kelly, Head, Human Factors Branch, Georgia Technology Research Institute, Atlanta, Georgia